

ABSTRACT OF THE DISCLOSURE

A selectively inducible, single-stranded DNA (ssDNA) expression library, a method for constructing a ssDNA expression library, a method for screening ssDNA using the expression library, and a method for identifying ssDNA molecules that alter expression of bacterial gene(s) related to cell growth and toxin production and secretion. The 5 screening library is used to, among other things, identify ODNs effective in stopping bacterial growth, killing bacteria or preventing bacteria from synthesizing and secreting their toxins, and/or to discover ODNs effective in eukaryotic (e.g., mammalian) cells for targeted alteration of gene function. The library is also useful for identifying ssDNAs or ODNs that are used as therapeutic antibacterial reagents, for identifying essential bacterial 10 genes that can serve as targets for antibiotic discovery, and for providing a method for treatment of bacterial infections.